

Serial No. 09/499,442

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Greer et al.	Docket No.: 0908-CE RFB REF: CRUS-0164
Serial Number: 09/499,442	Art Unit: 2174
Filing Date: February 7, 2000	Examiner: Nhon D. Nguyen
Title: USER INTERFACE SYSTEMS, METHODS, AND COMPUTER PROGRAM PRODUCTS FOR MULTI-FUNCTION CONSUMER ENTERTAINMENT APPLIANCES	

MISCELLANEOUS COMMUNICATION

Honorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

Sir:

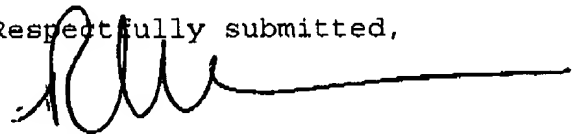
In response to the phone call from Examiner Nguyen, attached are the SUBSTITUTE SHEETS for the SPECIFICATION, pages 28, 29, 30, and 34 for the above-captioned application. These were submitted with the Amendment of June 2, 2003 along with marked-up copies of these SUBSTITUTE SHEETS.

There are no pages 18-27 in the Amendment as filed. The pages 28-30 and 34 are intended as SUBSTITUTE SHEETS FOR THE SPECIFICATION.

Under the new amendment procedure, the undersigned was under the impression that these SUBSTITUTE SHEETS were the preferred method for amending the Specification. Copies of these sheets were submitted on June 2, 2003 and are again submitted herewith.

If another amendment procedure is preferred, please contact the undersigned. Frankly, the old method of underlining and bracketing worked pretty well.

Respectfully submitted,



Robert P. Bell
Registration Number 34,546

Robert Platt Bell
Registered Patent Attorney
8033 Washington Road
Alexandria, VA 22308
(703) 768-0340
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step 71 may cause the letters AV to be displayed on the monitor, so the user will identify the current mode of operation. Clicking again will put the remote in control of predetermined PC multimedia functions.

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Figure 2A is a block diagram of a multimedia system 80 having set-top box 81, television 82, speaker or speakers 83, input devices 84, and coaxial cable 96 or other link between television 82 and set-top box 81, capable of alternative audiovisual and multimedia operation subject to mode selection methods. Set-top box 81 may include bus 95 which interconnects RAM 86, ROM 87, modem 88, processor 89, input device interface 90, video card 91, TV tuner 92, DVD/CD player 93 (playing DVD/CD or other medium 193), mass storage 85 (e.g., hard drive) and sound card 94. Video card 91 and TV tuner 92 may be connected by coaxial cable 92 with a video input port of television 82. Sound card 94 may be connected to an audio input port of television 82.

As discussed above, input devices 84 may include remote control devices such as a TV type remote control device and may typically be of the infrared or RF type remote control type. Input device interface 90 may comprise a infrared to USB signal converter. Input device interface 90 may receive remote control signals, and, depending upon context of use (as previously discussed) convert these signals to USB signals for controlling a

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particular device. Thus, an infrared signal for the numeral "2" would remain the same regardless of whether such a signal was intended to change a television channel, select DVD track, dial a phone number, or type the number "2" in an e-mail message. Input device interface 90 (and/or software relating thereto) may receive such a signal, and, cognizant of the context of the signal (i.e., which application is running in the foreground) generate the appropriate USB signal to control or communicate with the appropriate device in the system.

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Note also that bus 95 may represent one or more physical busses within set-top box 81. Set-top box 81 may include, for example, a universal serial bus (USB) for communicating between peripheral devices. Other system buses (e.g., P-bus, ISA bus, or the like) may interface with the USB and processor 89 and other system resources (e.g., RAM 86 and ROM 87). Such a bus structure is known in the computer art and may be applied here without departing from the spirit and scope of the present invention.

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One or more input devices 84, including but not limited to, a keyboard, mouse, or remote control input device, may be coupled hard-wired or wireless signal communication with input device interface 90. Modem 88 may connect set-top box 81 to the Internet and World Wide Web 97.

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Processor 89 may comprise, for example, a Pentium™ class processor manufactured by Intel Corporation. Construction of such a Pentium™ class PC architecture is known to those of ordinary skill in the art. In order to reduce cost for the consumer market, however, many "legacy" features and connectors of a traditional PC may not be implemented in set-top box 81 of Figure 2A. Moreover, the overall appearance and configuration of the set-top box 81 may be more akin to a consumer electronic device (e.g., VCR, DVD player) than a personal computer.

Figure 2B is an opening screen main menu user interface 94 which may appear on the television screen to permit simple non-window presentation of user mode selection options. In particular, main menu 99 shows button or actuation fields for selection of operational modes: TV 100, DVD 101, world wide web (WWW) 102, games 103, communication 104, PC operation 105, and multimedia or audiovisual modes 106. By positioning the cursor over the particular desired button and making a mouse click or double-click, or by actuating the desired button with another input device such as a remote control, a desired multimedia mode may be selected.

Figure 3 is a digital video audio control display for a user interface. In particular, the display shows a window including audio mixer control fields 109, DVD control fields 110, a DVD/CD

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hardware in the video out chip and only if a user is connected to a TV. If the user is not connected to a TV, the UI, it would not do this. Once the application is stopped, the user interface automatically switches back to the standard VGA mode to enable the
5 UI to be displayed again.

Additionally, the UI is used to switch back and forth between applications which are either running or to launch new applications. In a Windows environment, a user may launch
10 applications by selecting the application through the start menu. A user may also check to see which applications are running by hitting CTRL-ESC. Then the user may switch to one of the running applications by holding down the alt key and continuously hitting the tab key to cycle through the applications. However, all of
15 these require separate multiple keys to perform or require a keyboard. This is possible to do with just a mouse.

In the UI of the present invention, if a user wants to watch a DVD movie and then a call comes in, the user may hit the menu key
20 to go to the UI, then select the telephony application. If the application is already loaded and running in the background, the UI knows this and becomes a context manager to switch applications. If the application is not loaded, it launches the application in time to answer the call. Then the user may then use the Menu key